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Debt sustainability  
in question

# E C O - N O T E

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Advanced economies' debt burden surged to a record in 2020 due to the combined shocks of the Great financial crisis and the pandemic. Are we heading for a debt crisis?



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### A theoretical framework

The notion of sustainability of public debt is rather subjective. Nevertheless, in the broadest sense, a debt is deemed sustainable when a country is able to honour its present and future obligations while conducting economically feasible and politically realistic policies.

In a theoretical framework, debt dynamics can be expressed as follows:

$$D_t = D_{t-1} \frac{(1+r_t)}{(1+g_t)} + pb_t$$

where  $D_t$  is the ratio of public debt as a percentage of GDP.

The debt trajectory therefore depends mainly on three variables. First, on the real interest rate “ $r$ ”, which is positively correlated to debt, as high rates exacerbate the debt burden. Second, debt is negatively correlated to real

growth “g”, as robust economic activity generally produces higher revenues, thus improving public accounts. Third, debt dynamics are positively correlated to the primary deficit ( $pb_t$ ), as spending above receipts increases the debt burden.

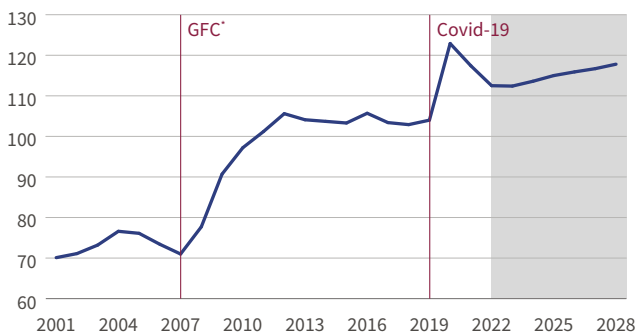
Hence, the lower interest rates are compared to economic growth ( $r < g$ ), and the lower the primary deficit, the more sustainable a debt will be.

Until recently, growing public debt posed little risk. Indeed, with inflation staying very low during the post-financial crisis years, central banks embarked on a radical accommodative monetary policy by massively buying sovereign bonds under their quantitative easing programmes while keeping their key rates low, or even negative in some cases. As a result, low interest rates made financing of deficits much easier.

But the pandemic profoundly altered the macroeconomic landscape, putting the spotlight back on public debt sustainability risks.

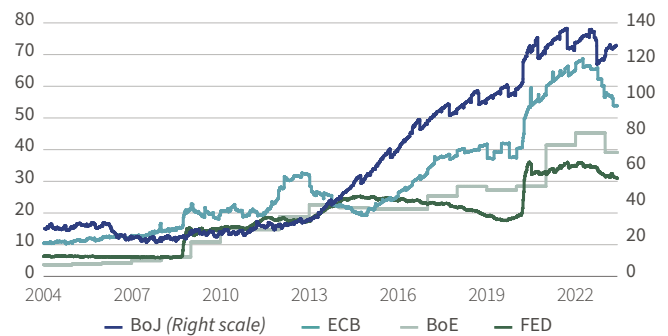
Central banks have been facing rising prices, inflation reaching 40-year highs. The resulting tightening cycle has pushed up sovereign yields, thus making it more expensive to service sovereign debt. Although inflation still hovers well above central bank targets across much of the world, it has

**Advanced economies – Public debt**  
as % of GDP



Sources: IMF, Rothschild & Co Asset Management, November 2023  
\*Great Financial Crisis

**World – Central bank balance sheets**  
as % of GDP



Sources: Macrobond, Rothschild & Co Asset Management, November 2023

started to decline thanks primarily to the reversal of commodity prices and a marked slowdown in manufacturing prices. However, given the stubborn pressures on core inflation, central banks may have to keep their key rates higher for longer, thus exacerbating the debt burden.

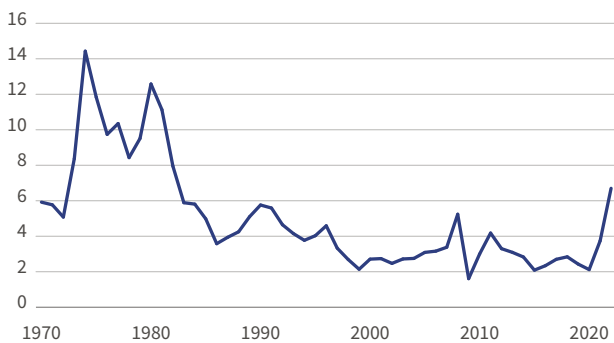
### Inflation’s ambiguous impact on public finances

The debt/GDP ratio has receded since inflation returned in 2021, and some investors see it as a miracle solution to the debt problem.

In the short term, inflation generally lowers the debt ratio, as when prices rise, nominal GDP (the denominator) surges, thus automatically lowering the ratio. Moreover, state income rises in parallel with prices, particularly through higher VAT receipts, which narrows the deficit.

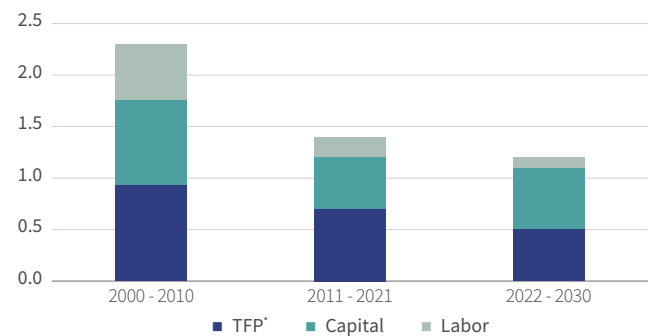
In the longer term, however, indexation of some public goods and services (wages, pensions, etc.) raises governments’ outlays, in turn exacerbating the deficit. The same effects are caused by support measures that are generally taken to offset inflation’s impact on household and business purchasing power.

**World – Inflation rate**  
in %



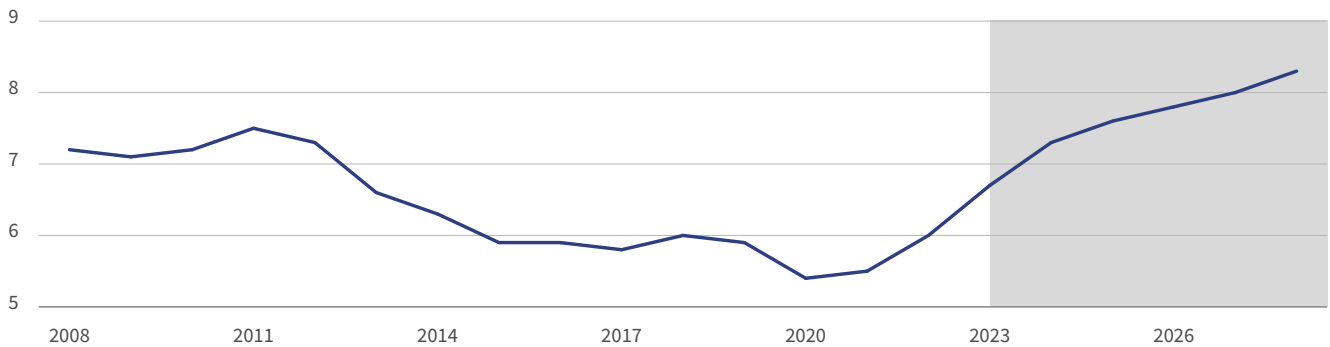
Sources: World Bank, Rothschild & Co Asset Management, November 2023

**World – Potential growth**  
in % of GDP



Sources: World Bank, Rothschild & Co Asset Management, November 2023  
\*Total Factor Productivity

**Advanced economies – Interest payments**  
in % of gov. revenues



Sources: IMF, Rothschild & Co Asset Management, November 2023

There is also the matter of the debt structure. If debt consists of maturing short-dated bonds, those bonds will have to be rolled over at higher current interest rates, thus increasing the debt burden. Likewise, if the debt includes inflation-linked bonds, debt-servicing costs will surge.

In short, inflation does lower the debt ratio in the short term, but this doesn't last and is certainly not a permanent solution to the debt problem.

**Some worrisome trends in “g”...**

Growth (g) and interest-rate (r) projections are a source of concern with regards to the sustainability of public debt.

Potential growth<sup>(1)</sup> has been receding since the start of the century, and that trend is projected to continue<sup>(2)</sup>. There are two reasons for this: the ageing of the population and weaker productivity gains.

There is no consensus on why productivity gains have weakened, but there are several possible causes. One of these is low capital-intensity, caused by weak demand and the decreasing share of public investment

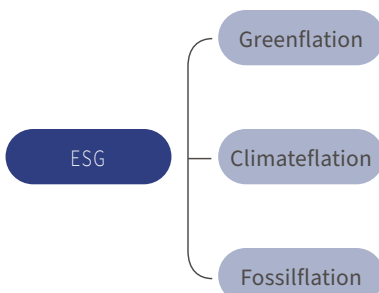
(1) Potential GDP is defined as the maximum output possible without exerting pressure on prices.

(2) Kose, M. Ayhan, and Ohnsorge, Franziska, "Falling Long-Term Growth Prospects: Trends, Expectations, and Policies", World Bank, 2023.

in GDP. Similarly, structural changes have reduced productivity gains due to the increasing share of the services sector in total employment, where productivity gains tend to be lower than in the manufacturing sector.

In addition to structural factors, the very notion of growth has become divisive in an increasingly polarised political environment. Growth stands accused of promoting an increasingly carbonated economy and has come under fire from partisans of energy sobriety. Some of them are even anti-growth, advocating the reduction of energy consumption and a transition towards other, greener modes of production. As a result, the trade-off between the goal of sustained growth and the adoption of energy sobriety policies will be decisive in the trends of factor (g).

### ...and “r”...



Another factor likely to affect the trajectory of public debt is interest rates.

Prior to the pandemic, rising public debt seemed painless as it was financed at low cost. Since then, the economic context has shifted, and interest-rate hikes put through to combat inflation have pushed up debt servicing costs. This raises the question of whether rates will stay high for long.

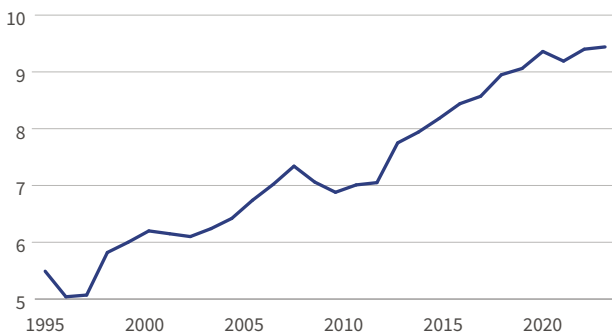
The level of interest rates depends partly on the level of inflation, and several factors suggest that consumer prices will be more volatile than during the post-Financial crisis period, driven mainly by the energy transition, for three reasons.

First, the energy transition will drive commodity prices higher, a phenomenon known as “greenflation”, as it will require a considerable quantity of minerals and metals, such as copper, lithium and cobalt, pushing prices up.

Second, it is assumed that global warming will cause more and more natural disasters, such as droughts, and that will affect food prices. This is known as “climateflation”.

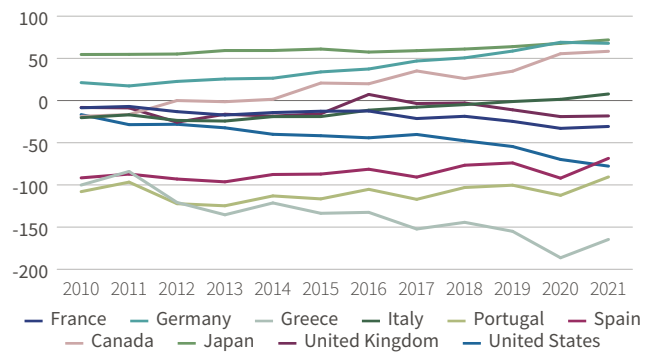
And, third, the ramping up of climate policies is pushing up fossil fuel prices, by disincentivising investments in such energies. This is squeezing supply, while demand is likely to remain high for some time to come. This is known as “fossilflation”.

**Advanced economies – Average maturity of public debt in years**



Sources: OECD, November 2023

**Advanced economies – Net international investment position as % of GDP**



Sources: Macrobond, Rothschild & Co Asset Management, November 2023

All of this suggests that inflation could be more volatile than previously. As a result, investors may demand a higher risk premium in compensation for this price uncertainty. And, all other things being equal, this is likely to result in sovereign yields that are higher than in the 2010s.

**... but there are some reassuring factors**

But not all the news is bad. The average maturity of debt has risen steadily since the end of the 1990s and is now at more than nine years<sup>(3)</sup>. Moreover, weak potential growth could cause central banks to keep interest rates low, in order to boost growth<sup>(4)</sup>.

Another source of reassurance is the gradual improvement in the net external position of most advanced economies. The net external position is the value of the assets that country owns abroad, minus the value of the domestic assets owned by foreigners. If a country's net external position is positive – i.e., if it owns more assets abroad than its domestic liabilities – it is regarded as more solvent and more able to deal with potential economic shocks. For example, Japan's public debts exceed 200% of its GDP, but its external position makes it less vulnerable to external shocks. We will discuss this further in a future edition.

## Are we heading towards a debt crisis?

In the short term, the risks surrounding the public debt burden appear to be limited, as governments have more time to roll over their debt stock, as maturities have lengthened. However, the expected decline in potential growth and the possibility of more volatile inflation are indeed significant risks. Moreover, the climate transition and the impact of the ageing of the population on healthcare and pension spending, combined with plans to raise defence expenditure, are other factors that will weigh on public finances. In addition, the general public's expectations of fiscal intervention to mitigate economic shocks have risen since the pandemic and the energy crisis. Barring adjustments to spending or increases in taxes, all these factors will result in a considerable increase in the public debt/GDP ratio in the future<sup>(5)</sup>.

Debt sustainability therefore looks like a challenge that could soon take centre-stage.

(5) OECD, "Coping with high inflation and low growth", 2023.



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